From the author of Hacking the CAGED System



GUITAR HACKS

THE PENTATONICS HANDBOOK

BY GRAHAM TIPPETT

Contents

Introduction

The very first scale most guitarists learn when they begin to explore the world of improvisation is often the Minor Pentatonic Scale, usually it's A Minor or E Minor form. While this scale has been the crux of much of rock and blues music for the best part of a century, in the modern era of guitar playing it deserves a more thorough exploration through new pentatonic concepts, ideas and insight.

Over 10 in-depth lessons, this book will deepen your understanding of pentatonic scales while opening your eyes to a myriad of ways in which they can be used and exploited to build up an arsenal of improvisational tools based on these five-note scales. We'll also cover the difficult transition from pentatonics to modes through a new method that allows you to retain your pentatonic prowess by intertwining it with the modes instead of abandoning pentatonic scales in favor of other more cumbersome scale systems.

In truth, most guitarists have barely scratched the surface when it comes to pentatonic scales, believing the major and minor pentatonic scales to be the end of the story when in fact, it's just the beginning.

So, if you know those five minor/major pentatonic boxes, and want to see how much farther this can go, this book is for you.

To your best playing yet,

Graham Tippett

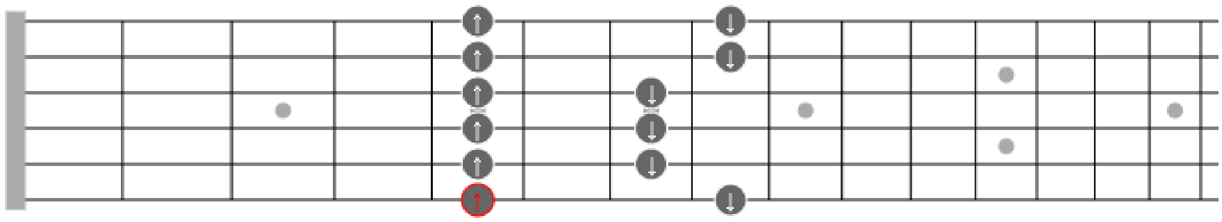
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How to Use this Book

You don’t have to work through the chapters of this book in order, although I have sequenced the concepts in order of difficulty. You could choose a concept you like the sound of and work on it until it becomes second nature (incorporated into your playing), or work through the book in order so as to build up a repertoire of pentatonic tools.

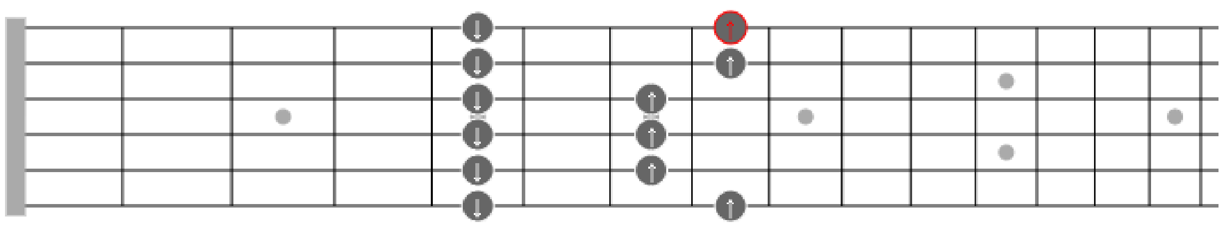
A Quick Word About Picking

The number of notes per string is a good determining factor for which picking technique to use, especially in the beginning. If you have an even number of notes on a string, i.e. 2 or 4, then use alternate picking. Alternate picking is strictly up, down, up, down, up, down or vice versa. Pentatonic scales, whose patterns generally contain two notes on every string, are a perfect candidate for alternate picking as we're dealing with even numbers of notes. Here's how you would pick box 1 of the minor pentatonic scale:



Follow the pattern from the root on the low E string and maintain the strict down, up, down, up as shown by the arrows. It's important that you start on a downstroke because you'll notice that when you go to change strings, the pick has just come from an upstroke, and is 'in the air' above the strings, making it easier to move to the next string. If you do this the other way around, i.e. starting on an upstroke, you'll find that the pick tends to get caught up in the strings more.

When you come back down the pattern, start it on a downstroke again as follows:



We do this for the exact same reason: to free the pick from the strings when you change to the next one. Practice these patterns as slowly as you need to without making mistakes. When you've gotten the technique down, bring in the metronome to make sure you're playing it in time too. **This picking pattern will work for all the other boxes of the minor pentatonic and all the scales patterns in this book**, or any scale with two or four notes per string for that matter.

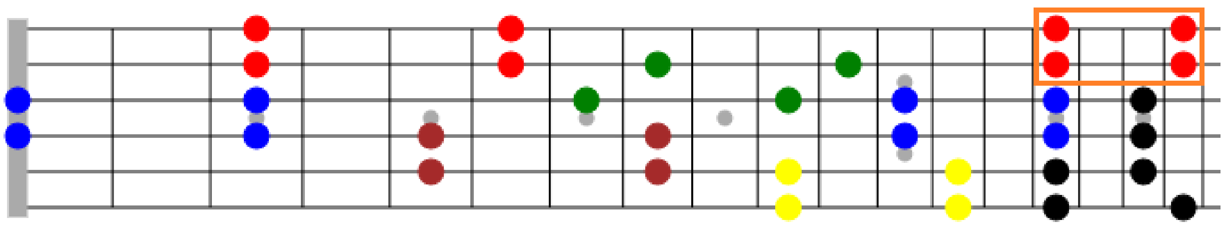
Tip: *Pay close attention to the way you're now changing strings on an upstroke; make a mental effort to do this when you're improvising too, as this will facilitate your ability to play very fast runs further down the line.*

The Other Four Minor/Major Pentatonic Boxes

Why do guitarists love Box 1 of the minor/major pentatonic scales so much?

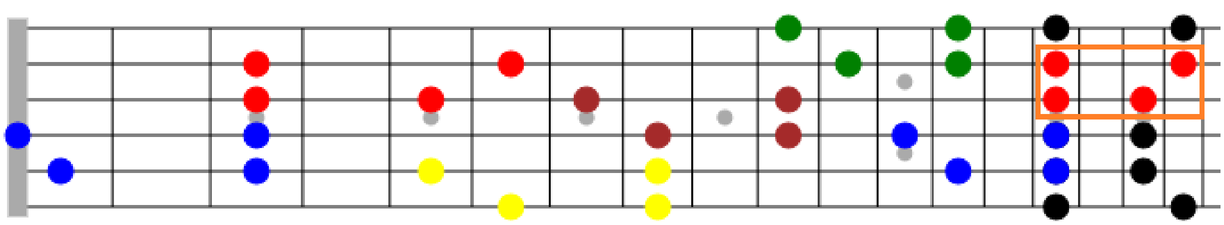
In Box 1 the notes fall so nicely under your fingers that you can pretty much play what you want to hear after a while. This is not so easy with the other four boxes, but what you can do is practice in the following way by simply transferring the sounds you know so well from Box 1 to the other Boxes.

I thought this was too simple to be true, but it really does work because it takes the already familiar and simply moves it to less familiar place on the neck. Check it out:



In the above diagram, you can see G Minor Pentatonic Box 1 up at the 15th fret. The (Layla) notes in red are then marked in other colors (blue, green, red and yellow) further down the fretboard; **they are the exact same notes**, but now you can see how they repeat through the other pentatonic boxes. It figures that whatever you can play up at the 15th fret, you can play at any other location where the same notes are available, including the bends, licks and melodies you would do. Note that the green notes are still the same pattern, they're just offset by the fretboard—the distance from the G string to the B string is a major third, not a fourth like all the other strings. Play the notes in the orange box, then play all the other colored notes to compare.

Check out the next set of notes:



This time we have a four-note pattern highlighted in Box 1 up at the 15th fret that's already offset by the fretboard as mentioned above; this is why all the other patterns are different but consistent. Again, the other colored notes are the same notes you play in Box 1, just in different places, and boxes, on the rest of the neck. Hopefully by drawing your attention to this fact, you'll start to feel confident about using the other four boxes.

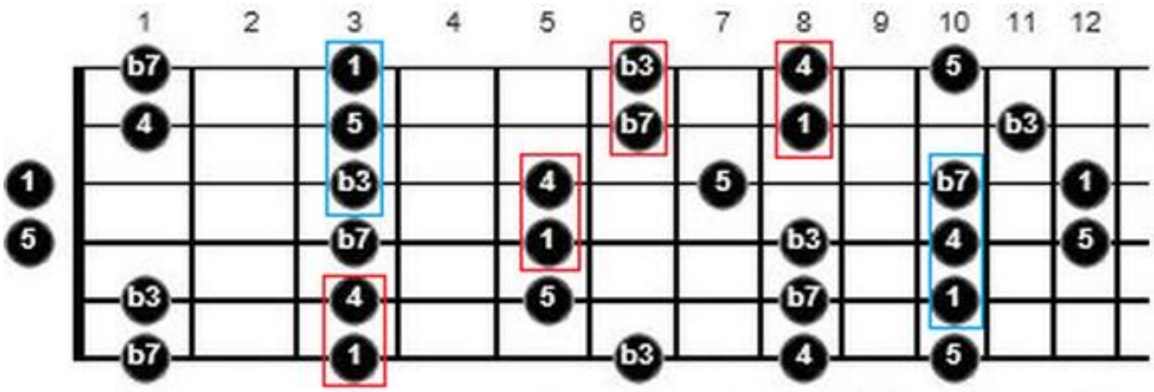
Now that you've gotten the hang of this, see if you can work out remaining sets of patterns, and how they repeat, for yourself. Remember that you can play all your treasured licks, bends and runs from box 1 in practically any other minor pentatonic box, thereby losing the fear of the other four boxes!

Can You Finger-roll?

A finger roll is when you play two or three notes on two or three adjacent strings with the same finger by rolling that finger across the strings so that they sound as single notes. At this point we break away briefly from strict alternate picking as here you'll want to drag the pick or do a mini-sweep to the adjacent string(s).

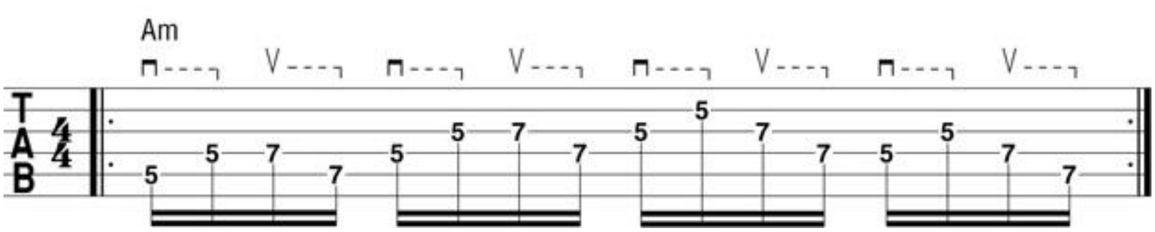
The finger roll technique is highly beneficial to your playing because it gives you more directional options when soloing, as well as discouraging you from playing very linear lines and runs. This is especially useful with scales such as the good old minor/major pentatonic which sounds much less cliché when you begin to incorporate the finger roll technique.

Check out the G Minor Pentatonic Scale below with various finger roll areas marked in red and blue.



As you can see, any two or three adjacent notes can be finger-rolled, and as the name of the technique suggests simply roll your finger over the two or three notes sounding each one separately, almost like slow-motion sweep-picking. As you roll your finger to play the next note, it should also damp the first one. To really make the most of this technique, make sure you can do it with each of your fingers, even your pinky.

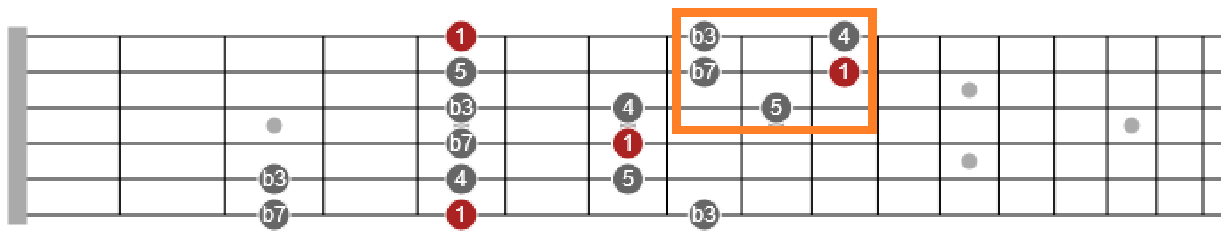
Here's a great lick to practice this technique with using your first and third fingers:

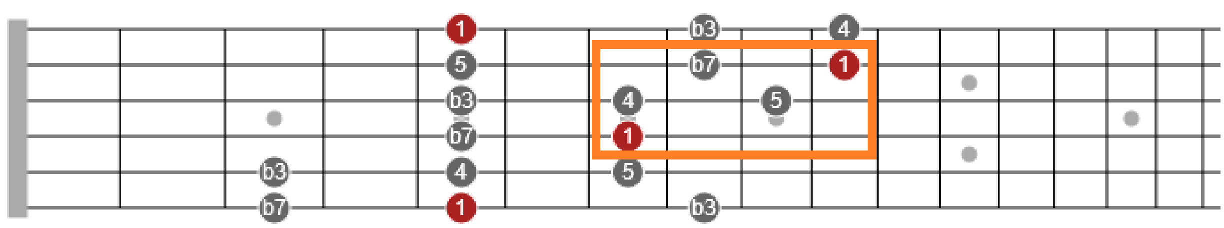


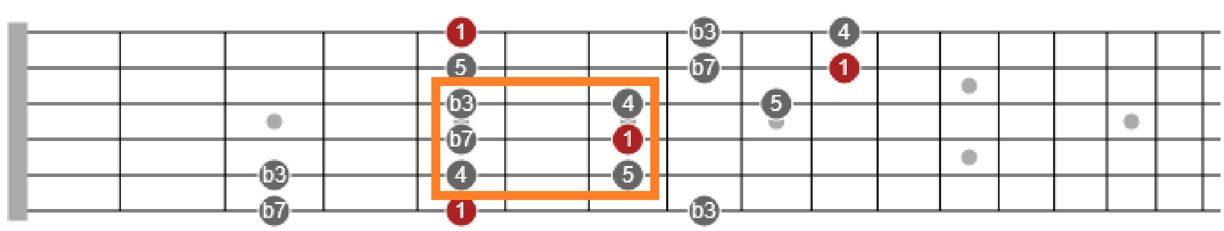
Less is More – The Breaking Out Myth

A lot of guitarists get stuck in the pentatonic boxes sooner or later and start looking for some way to break out of the confines of those well-worn shapes, but this is not the solution. The scale only contains five notes and playing those five notes in another location on the neck might vary your licks a little, but you'll still end up feeling stuck in boxes. The answer then is not more notes, but to do more with fewer notes.

A great way to do this is to isolate sections of a box pattern and restrict yourself to only those notes. Use the following groups of notes from 'Clapton' box pattern (or come up with your own) and see what you can come up with. Be sure to play through the initial frustration and before long you'll be playing stuff you didn't realize was there with just a handful of notes.



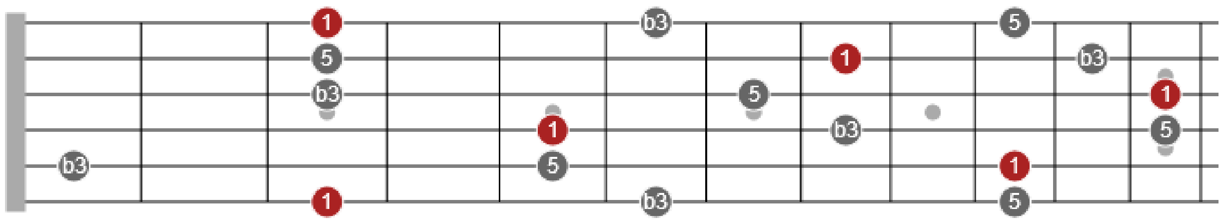




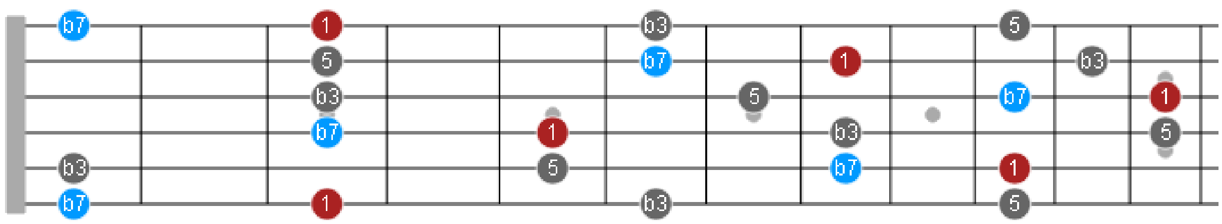
How to Get Melodic with Pentatonics

If you want a more melodic result from your pentatonic soloing, you need to look at them in a slightly different way. Follow the steps outlined here and you'll soon be seeing pentatonics in a whole new melodic light.

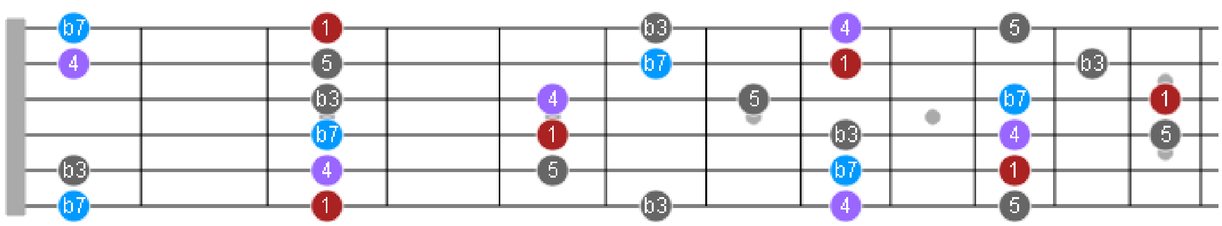
First, improvise using just minor triads from this diagram over a G Minor/m7 chord:



Then, add in one note (the b7) using the diagram below and keep improvising over that Gm chord. Really pay attention to the intervals you're playing and how they sound against the chord.



Finally, add in the 4 as shown in the diagram below and keep improvising.

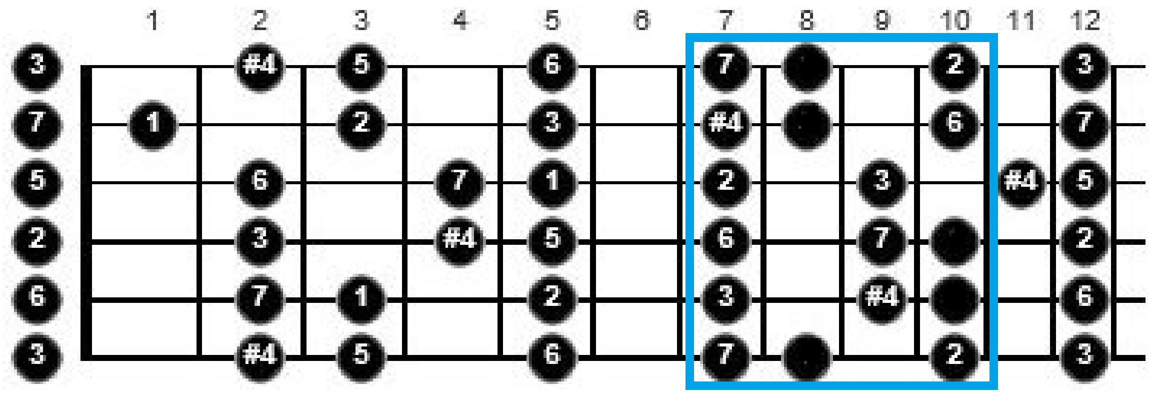


You've probably already realized that you're playing the good old Minor Pentatonic Scale, only now it sounds completely different, like rediscovering the scale in a melodic way. I guess it comes down to creating an awareness of where the strong notes are, and beginning to choose the notes you play, rather than just blasting through the scale, or playing a bunch of well-worn licks.

How to Play the Minor Pentatonic Scale Over Almost Anything

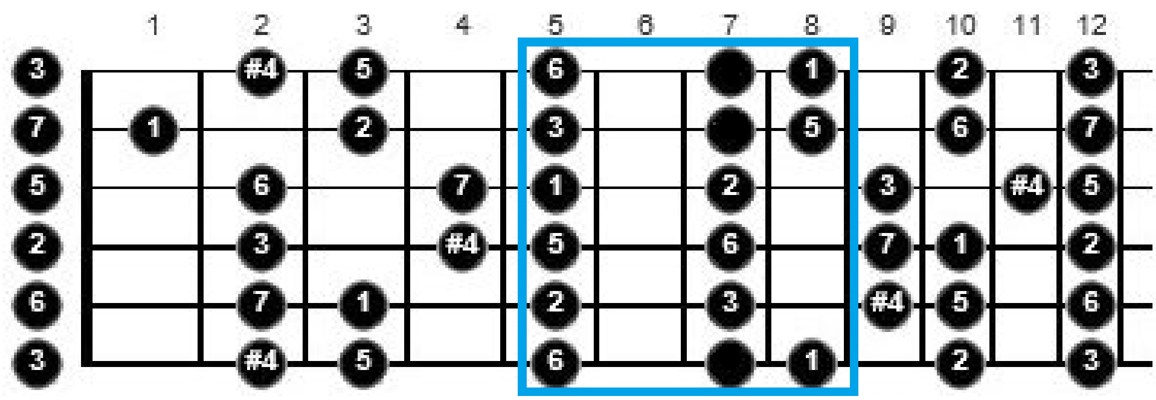
You probably wouldn't think to play box 1 of the minor pentatonic over a major or even a major 7 or major 9 chords but here's how you can get away with it, and sound slick into the bargain.

Here we see a G Major scale from the nut to the 12th fret. As you may know, C Major/C Major 7 is the IV chord in the key of G Major, but check out the contents of the blue square. It's box 1 of the B Minor Pentatonic scale! Can you play B Minor Pentatonic over a C Major/Major 7 chord then? Of course, you can, and it's going to sound cool because of the intervals you're (perhaps unintentionally) targeting.



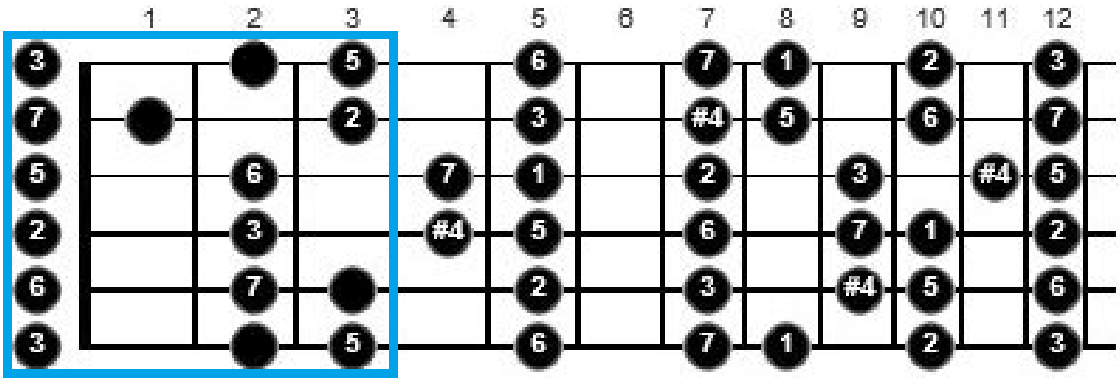
There's no root note in the scale, but you've got the 9th (2nd), the 7th, the #4 for that Lydian-esque sound, the 6th, and the major 3rd. Grab your looper pedal and try this one out over a C Major/Major 7 chord. Don't play your usual minor pentatonic licks (do try them though, because they'll sound sick) and spend some time 'getting hold of the sound'.

Check out the following diagram:



Do you see what I see? Yes, it's the most overused shape in guitar history, the A Minor Pentatonic box 1, which we can now play over C Major/Major 7. The root note C does feature here, and we've also got the major 3rd, the 6th, the 9th, and the 5th. Wait a minute, isn't this the C Major Pentatonic scale? It certainly is, this is just another way to get to it.

And finally, in case you didn't spot it.



Yes, good old E Minor Pentatonic can also be played over C Major/Major 7 chords. It's going to sound a little twisted though, so make sure you spend some time getting hold of the sound. There's no root in there again, and you've got the major 3rd, 5th, 6th, 7th and 9th to play with.

Homework: Check out the key of F Major which contains C Major/C7 as its V chord, and the key of C Major to find two other minor pentatonic box 1 patterns you can play over major chords.

From Pentatonics to Modes without Losing Your Chops

This is a common problem among guitar players: they get very good at getting some great licks and runs from major and minor pentatonic scales, then decide to learn modes and it all goes to pot. This is mainly because guitarists believe that to learn modes you need to adopt some other method such as the CAGED or 3NPS patterns. In doing this, their chops go back to zero because the plethora of new patterns bear no relation to the pentatonic ones they know and love, are very clunky, and harder to get under control.

So, what if there was a way to keep playing pentatonics but have them sound like modes instead?

Need to Know

All you need to know to really take advantage of this insightful chapter are your major and minor pentatonic patterns, as well as your major scale patterns. Don't worry if you don't know them like the back of your hand yet as a fair idea of where the notes are in any major scale will be enough to understand and apply the crux of this lesson. If you don't know your major scales yet, read on too because this will give you a reason to learn them.

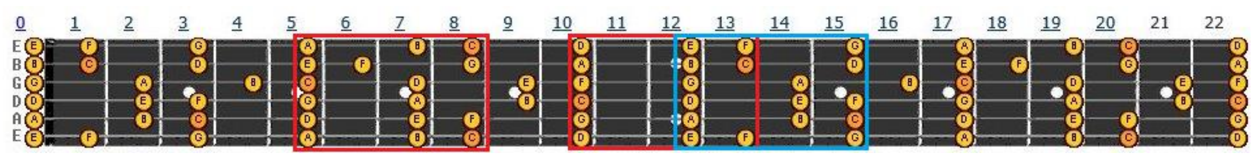
Modal Theory

The theory behind the modes gets unnecessarily complicated by guitarists and guitar teachers alike. All you need to know for this lesson is that if you start and end a major scale on any note other than its root, you get a mode. For example, if we start the C Major scale on D, we get the following notes: D, E, F, G, A, B, C, D – or D Dorian; if we start it on E we get E, F, G, A, B, C, D, E – or in other words, E Phrygian and so on.

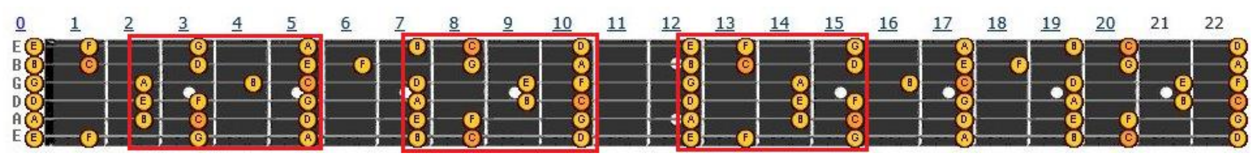
Let's stick with C Major as our example key. Here are the diatonic chords:

C | Dm | Em | F | G | Am | B°

The diagram below shows all the notes in C Major on the fretboard up to the 22nd fret. In the key of C Major, we have three minor chords: Dm, Em and Am, and if you look closely at the diagram, C Major also contains D Minor Pentatonic, E Minor Pentatonic and A Minor Pentatonic – ALL FIVE SHAPES FOR EACH SCALE. You'll see box 1 for each scale highlighted below, but all five shapes are there.



In the key of C Major, we also have three major chords: C, F and G. If you look closely at the diagram below you'll see box 1 of F Major Pentatonic, G Major Pentatonic and C Major Pentatonic!



Of course, the other four shapes for the major pentatonic are also there. You probably never noticed this because when you make the switch from pentatonic patterns to 3NPS or CAGED patterns, this whole relationship between pentatonics and major scales gets lost.

What Can I Do with This Information?

The difference between a pentatonic scale and a major scale is two notes, so with this information you can happily play D Minor Pentatonic, and if you know your C Major Scale, add in the two other notes and you have D Dorian. Play E Minor Pentatonic, add in the other two notes and you're playing E Phrygian. Play A Minor Pentatonic, add in the other two notes and you're playing A Aeolian. All without using cumbersome 3NPS or CAGED patterns – and I bet you'll still sound good!

The same is true of the major scales. If you play C Major Pentatonic and add in the two other notes you have C Ionian (C Major Scale); if you play F Major Pentatonic and add in the two other notes, you are now playing F Lydian. If you play G Major Pentatonic and add in the other two notes, you're playing the gorgeous G Mixolydian mode.

How Do I Use This in Other Keys?

If you want to transfer this information to another key, simply make a note of the diatonic chords as follows. Let's say our new key is F Major:

F | Gm | Am | Bb | C | Dm | E°

We have three minor chords (pentatonics) – Gm, Am, and Dm, and three major chords (pentatonics) – F, Bb, and C. When you add the other two notes from the F Major scale to any of these pentatonics you'll get:

F Ionian | G Dorian | A Phrygian | Bb Lydian | C Mixolydian | D Aeolian

The modes will always be in the above order in any key.

What about the Locrian Mode?

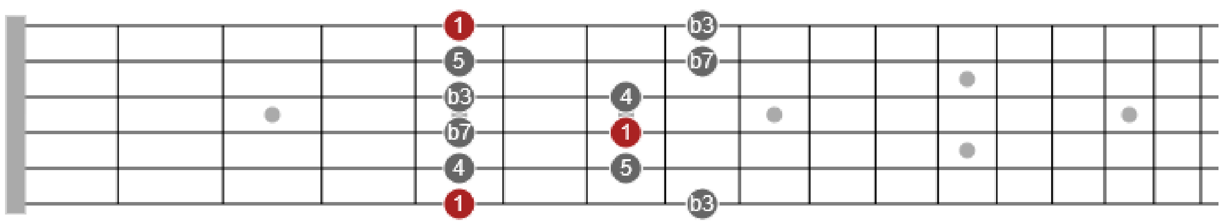
We didn't cover the Locrian Mode in this lesson because a) the other modes are way more useful, and b) it's not really based on a minor or major pentatonic.

Custom Pentatonic Scales

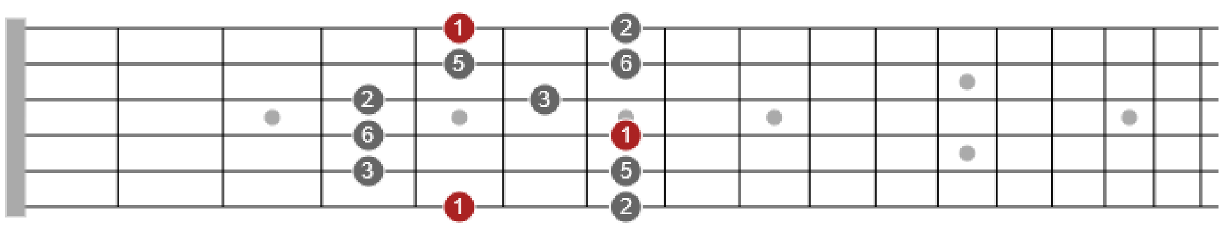
A pentatonic scale can be described as ANY scale with five notes, so why not make your own custom pentatonic scales? Here's how to do just that.

The rules for creating custom pentatonic scales are simple: the scale must have 5 notes and there must be 2 notes on each string. That's all there is to it. We'll base our custom pentatonics on the box 1 major and minor shapes as it's by far the most comfortable area on the fretboard. If you really like any of these scales, you can map them out in the other four positions.

Here's the minor pentatonic box:



Here's the major pentatonic version:



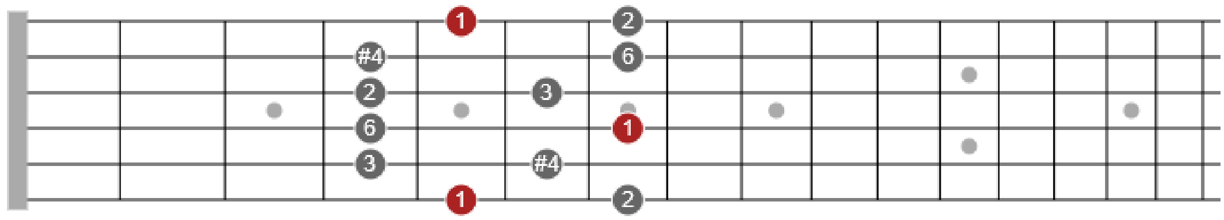
Custom Lydian Pentatonics

7-note scales such as the major scale and its modes, the melodic and harmonic minor scales will be our source of custom pentatonic scales. Let's start with the Lydian scale; if you haven't ventured into modes too much, or got stuck there, this will help you get that Lydian sound into your playing without trying desperately to squeeze some music out of those clunky 3NPS or CAGED shapes.

The Lydian mode has the following intervals: 1, 2, 3, #4, 5, 6, 7. The #4 is what makes it Lydian so that interval is a must. The Lydian mode is a major mode, so we can base our Lydian pentatonic scales off the major pentatonic.

Here are a couple of permutations that sound sick:

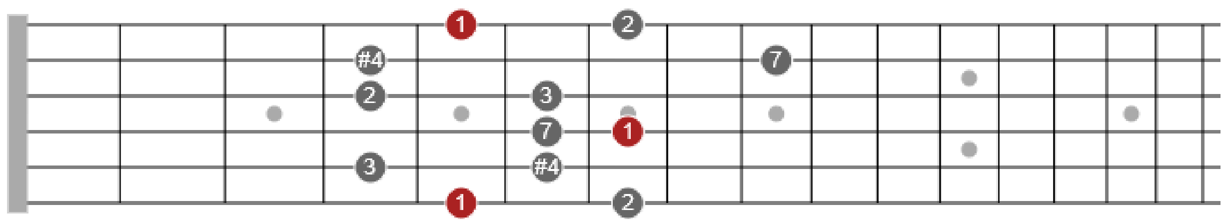
1, 2, 3, #4, 6



We only changed one note here from the major pentatonic, but it changes the sound dramatically.

Here's another possibility:

1, 2, 3, #4, 7

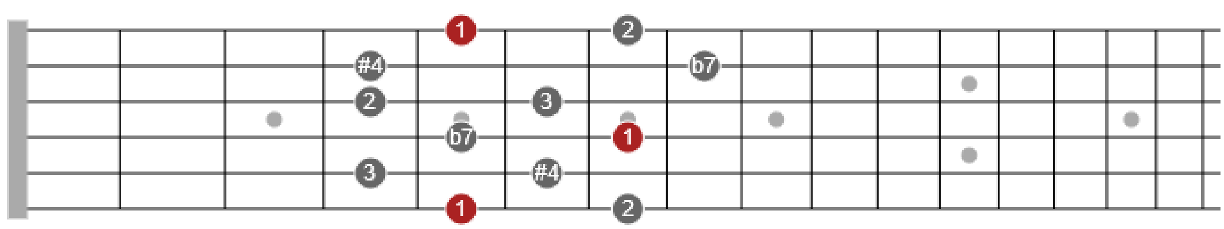


In this one we swap the 6 for the 7 to get a different Lydian vibe. There's a bit of a stretch on the B string from the #4 to the 7 for the sake of not breaking the two-notes-per-string rule, but this won't always be the case if you map out the other four patterns.

The fourth mode of the melodic minor scale yields the Lydian b7 mode which, as the name suggests, is a Lydian scale with a b7: 1, 2, 3, #4, 5, 6, b7.

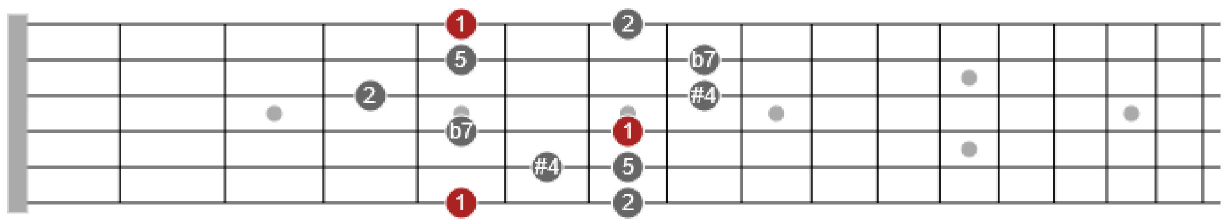
If we flatten the 7 in the above scale, we get the following permutation:

1, 2, 3, #4, b7



Here's another possibility based off the Lydian b7 mode:

1, 2, #4, 5, b7

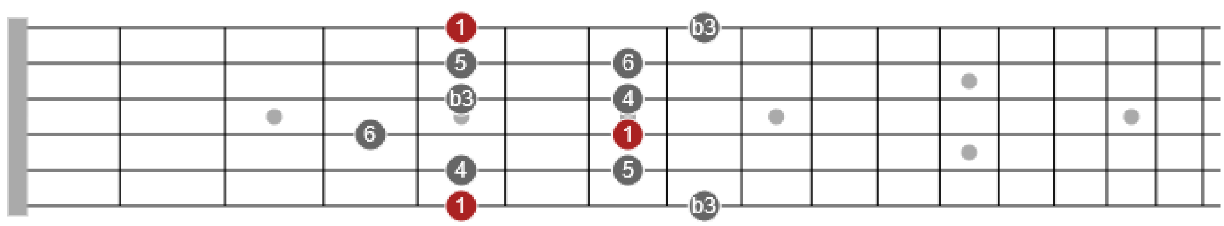


What's interesting here is that there's no third which makes the scale sound 'out' and very unsettled, great for creating some tension over a dominant chord.

Custom Dorian Pentatonics

If you're not quite able to bring out the sound of Dorian mode in your playing, try the following scales as we follow the same procedure by trimming down the 7-note scale. The Dorian mode has the following intervals: 1, 2, b3, 4, 5, 6, b7. The 2 (9) and the 6 are what make the Dorian scale interesting, so let's see what pentatonic permutations we can come up with. Use these pentatonics over minor and m7 chords.

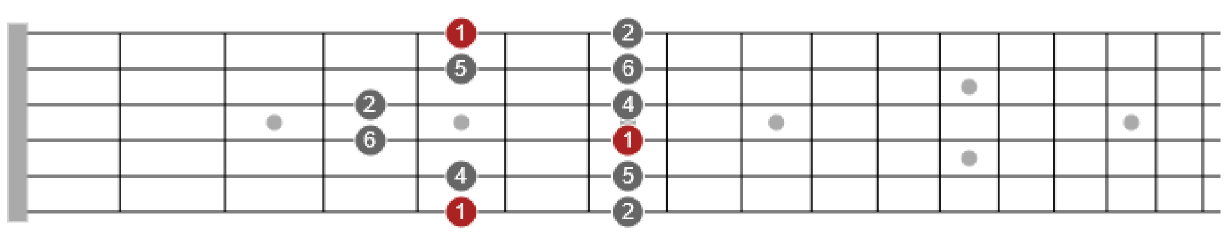
Our first permutation is: **1, b3, 4, 5, 6**



This one strays just far enough from the minor pentatonic to get a different sound, and reminds me of a John Scofield type sound, although he probably doesn't think this way.

Our next permutation features the 2 and the 6 but no third for a fusion type sound.

1, 2, 4, 5, 6



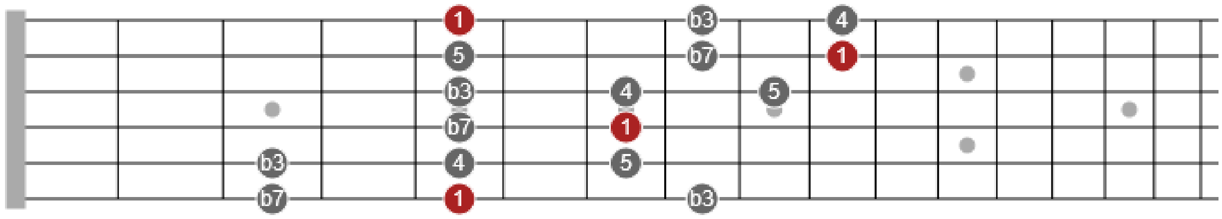
Notice that this is also box five of the minor pentatonic but with a different root note, and it follows that the rest of the boxes for this scale would be minor pentatonic ones, just with different starting notes.

You can probably see that there are plenty of permutations you could work out, and some you'll like more than others. If you want to find more pentatonics, simply follow these steps:

1. Take a 7-note scale. (major, harmonic minor, harmonic major, melodic minor etc.)
2. Reduce it to five notes that permutate to two notes on a string which include the characteristic notes of the scale.
3. Write out your custom pentatonic scale on a blank fretboard sheet.
4. Enjoy playing pentatonics without sounding like you're playing pentatonics at all!

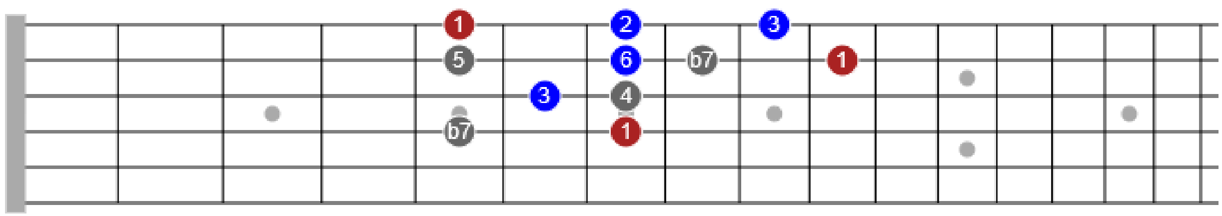
Quick and Dirty Melodic Minor Modes from Pentatonics

Let's start with the famous 'Eric Clapton' pentatonic box as shown below in A. This cuts out the necessity of spending months learning a bunch of new patterns so that we can get straight to the good stuff.



This pattern will save you in a great deal of playing situations but it can become stale very quickly. To add a little harmonic variation, we're going to modify just the top part of it as **the smaller the modification, the quicker you'll be able to incorporate it into your playing.**

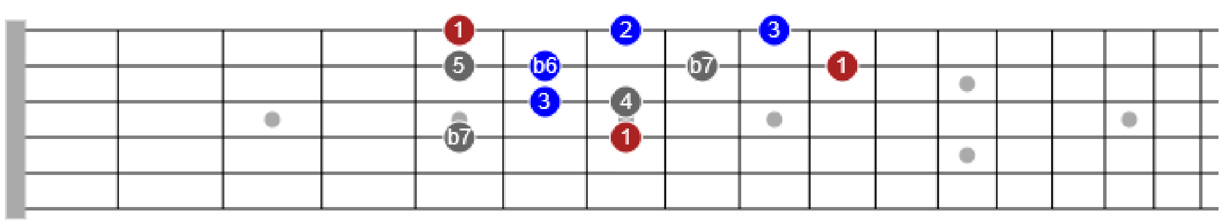
In the following diagrams the notes in blue are our modifications and will indeed give you the Mixolydian mode, but safely within the confines and comfortable hand position of possibly the most familiar scale pattern on earth.



The b7 and major 3rd combination provide that strong Mixolydian sound; also try bending the 2nd up to the 3rd and the 6th up to the b7 for a nice effect. You already know where the root notes are so keep those in mind in relation to our modified notes. By the way, all these modifications will work over a dominant 7 chord, in this case A7.

Minor modifications

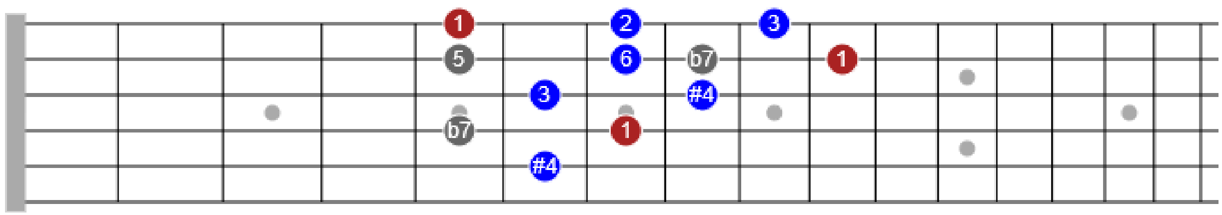
Alright, let's take things a step further and venture into those melodic minor modes by making a tiny modification to the Mixolydian scale to get the Mixolydian b6 scale as follows.



I’ve kept it to one note here so you can practice incorporating this new and slightly tricky sound. The benefit of this kind of exercise is twofold: a) you’re not just running up and down scales and b) your focus is on sound as oppose to technique.

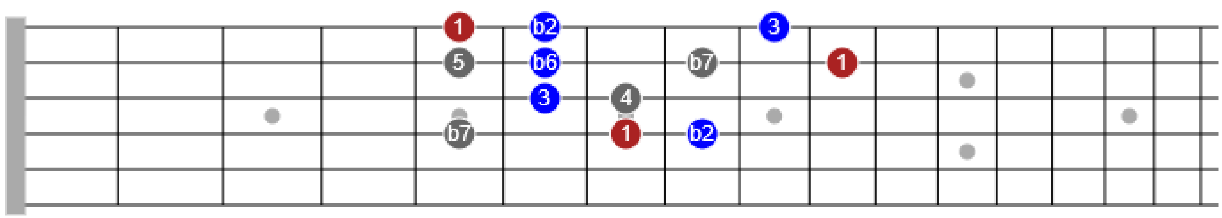
Going further out

The next scale we’re going to superimpose is the Lydian b7. As you can see in the diagram below, the Clapton Box is still there albeit a lot more warped now. This one takes a little more getting used to but shouldn’t be a huge jump from the blues scale as it’s virtually the same notes.



Still further out

Our final modification brings in the Phrygian Dominant scale, which you might not want to whip out during a blues jam but does provide for an interesting effect over a dominant 7 chord, or indeed a dominant 7b9 chord.



The distance of three semi-tones between the b2 and the 3rd is what gives this scale its distinctive sound. Play around with it to avoid getting that cheap Indian take-out sound though.

Breaking the Rules to Get New Sounds

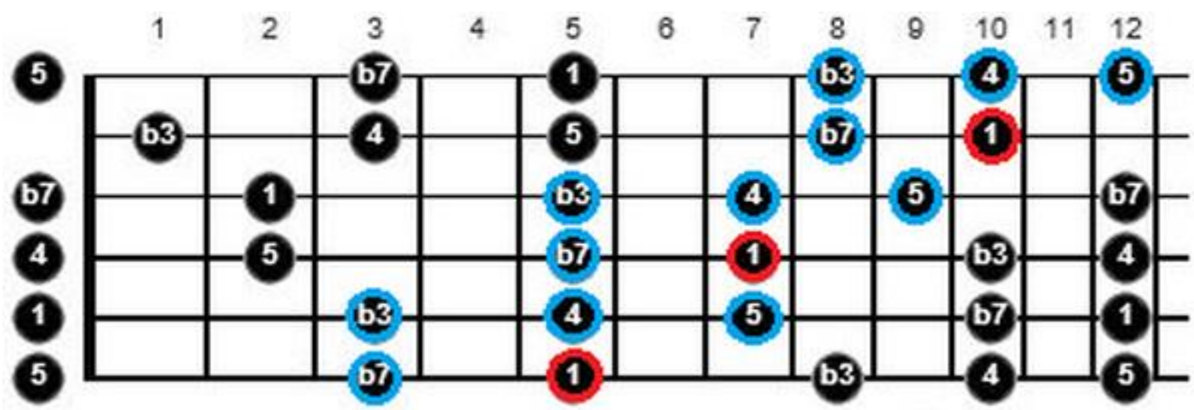
The famous five shapes are not set in stone, although their authority is rarely questioned—you get the five shapes to learn, you learn them and start wailing away over the nearest backing track. This is all well and good, but unless you're exceptionally creative, you're on the very well-worn path to death by sameness. Most of the time a simple change of perspective is all that's needed to make something as flogged to death as A minor pentatonic sound fresh and… less like A minor pentatonic.

Check out the following pattern which involves breaking the two-note-per-string rule to have the b3, 4 and 5 on the same string. Make sure your second finger plays the root note at all times to start off with, as this will stop you reverting to the boxes. Your fingering should be as follows:

Starting from the A at the 5th fret on the E string:

E string: 2
A string: 1,2,4
D string: 1,2
G string: 1,2,4
B string: 1,2
E string: 1,2,4

Come back down the position with the same fingering.

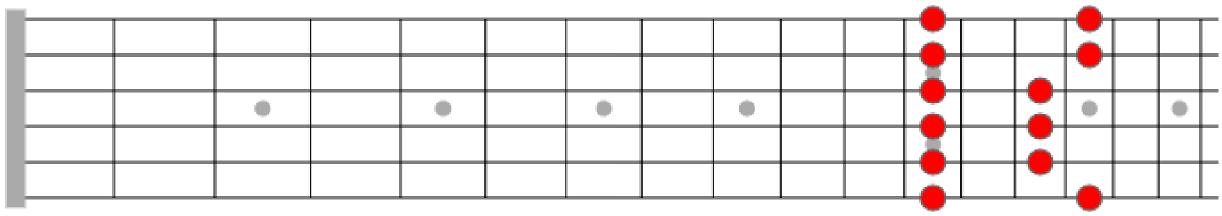


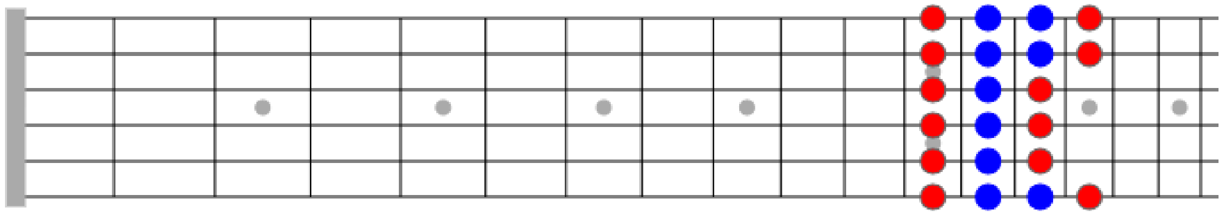
It feels a little strange at first but it immediately gets you away from any cliché A minor pentatonic lick, and if played at speed is a great run by itself. We're using the exact same notes as box 1 but this slight change of perspective will lead you to new ideas, and things you probably wouldn't have thought of playing in A minor pentatonic from the 5 boxes perspective.

Playing Out

Pentatonics are great for playing outside stuff, and if you're new to this, you don't want to move your hand into any uncomfortable or new position as this in combination with the need to resolve to an 'in' note will throw you off too much.

Here's the classic E minor pentatonic box at the 12th fret. To get some outside tones in there, all we do is 'color it in' as follows.





If you're using one finger per fret, you shouldn't need to move your hand at all to incorporate all those glorious outside/passing tones. Even if you're using your first and third fingers to play this box, the hand movement is minimal, and more importantly, not enough to throw you off. The great thing about this idea is that you instinctively know how to resolve those outside tones because your hand knows instinctively where the 'inside' tones are as it doesn't have to move. What you can also do here is start out using the blue notes as passing tones, then gradually bring them into your normal pentatonic licks.

A Final Word

I hope this book has provided you with plenty of new ideas and concepts to apply to your playing, as well as a new, more efficient way of learning scales on guitar. A thorough knowledge of pentatonic scales and their applications is a very powerful tool to have at your disposal, and will surely take your playing to new heights.

To your best playing yet,

Graham Tippett

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